

CLAIMS

1 1. An communications system for providing communications between
2 enterprises and subscribers, each subscriber being assigned to an enterprise, comprising:

3 an aggregation component connected to a subscriber virtual connection for
4 each subscriber and connected to an enterprise/system virtual connection for each enterprise,
5 the aggregation component for mapping the subscriber virtual connection of each subscriber
6 to an enterprise/system virtual connection of the enterprise to which the subscriber is
7 assigned;

8 a switching component connected to the enterprise/system virtual connection of
9 each enterprise, connected to a first and a second LAN virtual connection of each enterprise,
10 and connected to an enterprise virtual connection for each enterprise, the switching
11 component for binding the enterprise/system virtual connection of each enterprise to the first
12 LAN virtual connection of the enterprise and for binding the enterprise connection for each
13 enterprise to the second LAN virtual connection of the enterprise; and

14 an intermediary component connected to each first and the second LAN virtual
15 connections of each enterprise, the intermediary component for receiving data from the first
16 and second LAN virtual connections of each enterprise and processing the received data.

1 2. The communications system of claim 1 wherein the intermediary
2 component processes data received via the first LAN virtual connection of an enterprise by
3 transmitting the received data on the second LAN virtual connection of the enterprise and
4 processes data received via the second LAN virtual connection of the enterprise by
5 transmitting the received data via the first LAN virtual connection of the enterprise.

1 3. The communications system of claim 1 wherein the intermediary
2 component receives voice data via the second LAN virtual connection of an enterprise and
3 processes the received voice data by transmitting the data onto a public telephone network.

1 4. The communications system of claim 1 wherein the intermediary
2 component processes the data received via the second LAN virtual connection for an
3 enterprise by storing the received data in a storage area assigned to that enterprise.

1 5. The communications system of claim 1 wherein the aggregation
2 component is an ATM switching system.

1 6. The communications system of claim 1 wherein the switching
2 component is an ATM switching system.

1 7. The communications system of claim 1 wherein the intermediary
2 component includes interconnections between an ATM virtual circuit and a virtual local area
3 network.

1 8. A method for providing communications services between entities, the
2 method comprising:

3 establishing a physical connection with an enterprise entity and a connection
4 with plurality of subscriber entities;

5 receiving data from the enterprise entity and forwarding the received data to an
6 intermediary component via an internal virtual connection dedicated to the enterprise entity;

7 receiving data from the subscriber entities and forwarding the received data to
8 the intermediary component via the internal virtual connection dedicated to the enterprise
9 entity;

10 under control of the intermediary component,

11 when in a pass through mode,

12 forwarding data received from the enterprise entity to an intended
13 subscriber via an internal virtual connection dedicated to the enterprise entity; and

14 forwarding data received from a subscriber entity to the
15 enterprise entity via an internal virtual connection dedicated to the enterprise entity; and

16 when not in pass through mode,

17 forwarding data received from the enterprise entity to a virtual
18 LAN dedicated to the enterprise entity.

1 9. The method of claim 8 wherein the mode of the intermediary component
2 is based on the content of the received data.

1 10. The method of claim 8 wherein data is ATM data.

1 11. The method of claim 10 wherein the forwarding to a virtual LAN
2 includes converting ATM data to LAN data.

1 12. A method of doing business comprising:
2 establishing a connection between a network and enterprise entities;
3 establishing a connection between the network and subscriber entities, wherein
4 each subscriber entity is assigned to an enterprise entity;
5 transmitting data between the enterprise entities and their subscriber entities;
6 and
7 providing a service to an enterprise entity whereby the service uses data
8 transmitted to the network from the enterprise entity via the established connection.

1 13. The method of claim 12 wherein the network uses an ATM protocol.

1 14. The method of claim 12 wherein the network segregates data for the
2 enterprises into virtual connections dedicated to an enterprise.

1 15. The method of claim 19 wherein an enterprise entity can transmit data to
2 subscriber entities through different service providers.

1 16. The method of claim 12 wherein the provided service includes
2 converting ATM data to LAN data.

1 17. The method of claim 12 wherein the service is forwarding data between
2 the enterprise entity and a telephone network.

1 18. The method of claim 12 wherein the service is archival storage of data
2 of an enterprise entity.

1 19. The method of claim 12 wherein some subscriber entities are connected
2 to the network indirectly through service providers.

1 20. A method in a communications system for transmitting data from
2 subscribers to enterprises, the method comprising:
3 receiving data of subscribers through multiple service providers using
4 different sub-network layers; and
5 for each enterprise, transmitting the received data of the subscribers
6 assigned to that enterprise into a network layer for the enterprise
7 whereby the data for each enterprise is transmitted via a separate
8 network layer.

1 21. The method of claim 20 wherein the sub-network layers are the physical
2 and data link layers of the OSI protocol and the network layer is the network layer of the OSI
3 protocol.

1 22. The method of claim 20 further including transmitting data from
2 enterprises to subscribers by receiving data of an enterprise through a network layer for the
3 enterprise and transmitting the data to the service provider associated with the subscriber.

1 23. The method of claim 20 wherein an aggregating ATM component
2 receives the data from the service providers.

1 24. The method of claim 20 wherein a switching ATM component transmits
2 data to the enterprises.

1 25. The method of claim 20 further including receiving data from an
2 enterprise and forwarding the received data to a LAN dedicated to the enterprise.